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ABSTRACT

A measurement model was developed and refined in two successive need assessment surveys of samples representative of statewide populations. The first was the Kentucky Elderly Need Assessment (KENA) which was administered to 570 persons, age 60 and older, across Kentucky. The second was the Kentucky Social Services Need Assessment Project (SNAP), which was administered to over 1800 Kentucky adults. Both surveys were administered face-to-face in the respondent's home. The measurement model included: (1) a prioritizing of need by the respondent from a long list of possible needs; (2) a conceptualization of need as being multi faceted and, therefore, use of different types of measures of need (in SNAP: descriptive, evaluative, service difficulties, service barriers, and adequacy of services in the community); (3) measurement of need across a wide variety of topics or areas in which people might have needs (in SNAP: mental health, financial, social activity, employment, physical health, transportation nutrition, and environment); and (4) inclusion of a criterion variable, a measure of Quality of Life which was used to assess the validity of the need measures. (Author/RL)

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A NEED ASSESSMENT MEASUREMENT MODEL AND ILLUSTRATIVE FINDINGS BASED ON TWO STATEWIDE SURVEYS[1]

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Running head: Need Assessment Model

A NEED ASSESSMENT MEASUREMENT MODEL AND ILLUSTRATIVE FINDINGS BASED ON TWO STATEWIDE SURVEYS[1]

I. PURPOSE

The purpose of this presentation is to:

A. outline a differentiated and comprehensive measurement design for need assessment;

B. offer illustrative findings;

C. briefly sketch findings on the validity of this design and the measures it contains; and,

D. to illustrate usage implications for such a design.

II. CONCEPTUAL AND MEASUREMENT PROBLEMS IN DEFINING NEED

Among the many problems of doing need assessments, a central difficulty is the lack of a universally accepted definition of "need" in the need assessment context.

Nguyen, Attkisson and Bottino (in press) emphasize that:

(a) need has many different dimensions of need; and,

(b) that need can be measured on different levels, e.g., individual, family, community.

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[1]Presented at a symposium "Need Assessments in Two State: Research, Planning, and Community Perspectives" Alex Zautra, Chair, American Psychological Association Annual Convention. Montreal: September 3, 1980.

Our measurement model assumes that experiencing of need can have different important aspects, therefore we used different types of need measures in different areas of life.

III. OVERVIEW OF PROJECTS

The measurement model was first developed for a statewide need assessment of older persons in Kentucky. This included an in-home survey of 570 persons age 60 and older. This was done for the state's Division for Aging Services (Schulte, Brockway, Murrell, Note 1).

About a year later, the state's Bureau for Social Services contracted with the Urban Studies Center of the University of Louisville to conduct a statewide need assessment of social service needs, which included an in-home survey of 1,800 adults in Kentucky, called the Social Service Need Assessment Project or SNAP for short. (Schulte & Murrell, Note 2; Schulte & Hutchins, Note 3).

The SNAP project also included a statewide telephone survey, a key informant survey, and a trends analysis based on social indicators. The measurement model applies only to the in-home survey.

The SNAP project provided for a cross-validation of the model used in the previous need assessment of older persons.

It also looked at several different at-risk populations.

IV. OUTLINE OF NEED ASSESSMENT MEASUREMENT MODEL

The measurement model as used in SNAP is outlined in this panel.

Panel 1

Outline of Need Assessment Measurement Model

A. Prioritizing of Need by Respondent

B. Different Aspects of Need Measured

   1. Objective or Descriptive
   2. Evaluative
   3. Services Difficulties and Barriers
   4. Sufficiency of Services

C. Different Problem-Areas: need measured on these topics

1. Mental Health	5. Physical Health
2. Financial	6. Transportation
3. Social Activity	7. Nutrition
4. Employment	8. Environment

D. Criterion Variable - operational definition of global need satisfaction: Perceived Quality of Life (Andrews & Withey, 1976).

V. ILLUSTRATIVE FINDINGS

A. Statewide Priorities

Now we will turn to some of the SNAP findings to provide you with an idea of the data such a design can offer. These will be data related to prevalence and intensity of need.

Table 1 shows the statewide priorities of respondents. Respondents were shown a list of 13 "areas of life" and asked to choose the three ... "most important (to you) and your family at this time in your life." Next, they were asked to choose the three that were least important.

It is perhaps noteworthy that religion ranks number two, this is an area often neglected by those of us in the human service professions.

TABLE 1

TABLE 1

PRIORITIES IN LIFE
STATEWIDE RESULTS

RANK	AREAS OF LIFE	VALUE
1	Family Relationships	1074
2	Religion	871
3	Physical Health	804
4	Income/Finances	368
5	Employment	179
6	Education	-67
7	Neighborhood and Environment	-80
8	Housing	-325
9	Nutrition	-337
10	Mental Health	-359
11	Recreation	-636
12	Transportation	-654
13	Social Activity	-703

B. Emotional Health Needs Summary

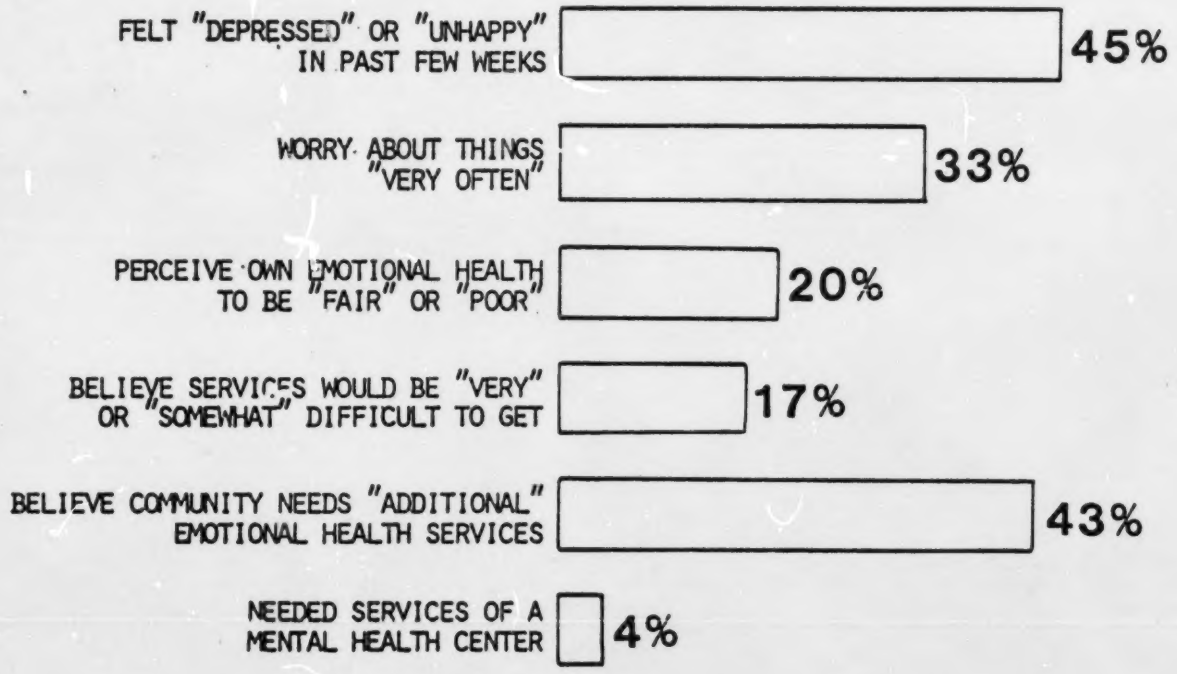
Table 2 gives a summary of some of the items and frequencies in one particular problem-area.

It is immediately obvious that the population more often admits to psychological problems than to needs for mental health services.

We will return to this point later.

Table 2

FIGURE E.H.
EMOTIONAL HEALTH NEEDS OF KENTUCKY'S POPULATION


FELT "DEPRESSED" OR "UNHAPPY" IN PAST FEW WEEKS
45%
WORRY ABOUT THINGS "VERY OFTEN"
33%
PERCEIVE OWN EMOTIONAL HEALTH TO BE "FAIR" OR "POOR"
20%
BELIEVE SERVICES WOULD BE "VERY" OR "SOMEWHAT" DIFFICULT TO GET
17%
BELIEVE COMMUNITY NEEDS "ADDITIONAL" EMOTIONAL HEALTH SERVICES
43%
NEEDED SERVICES OF A MENTAL HEALTH CENTER
4%

C. Emotional Health in At-Risk Samples

Table 3 compares different at-risk samples on emotional health.

This was the "objective" need measure, the 10 item Bradburn affect scale.

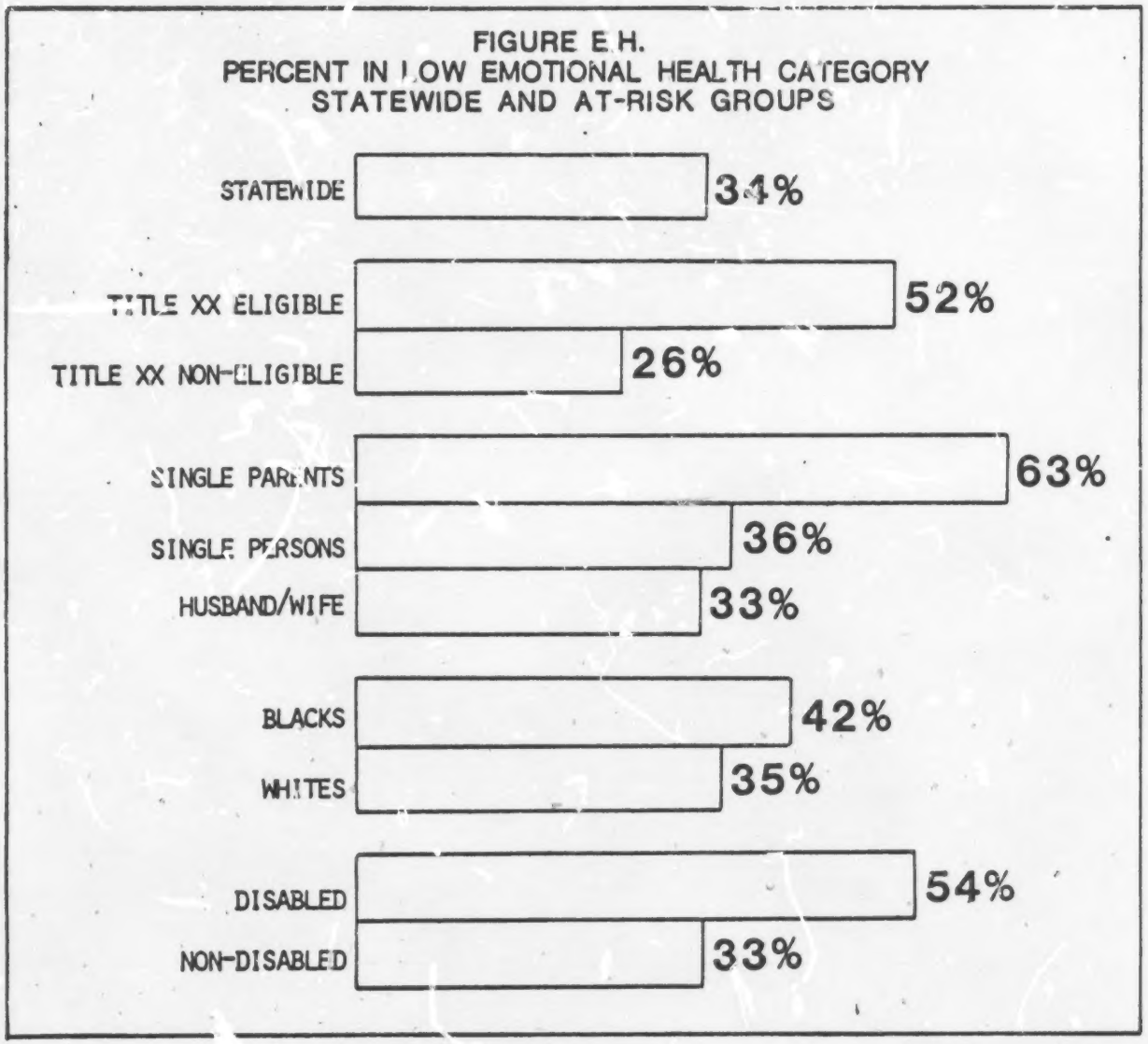
"Low" emotional health was defined as the score one-half of a standard deviation below the statewide mean, the lower third for the statewide sample.

"Title XX" is a low income sample, eligible for services funded by Title XX.

The most striking at-risk group here are the single parents: nearly two-thirds have low emotional health by this definition. This was true on other mental health measures as well. Single parents were dramatically the most at-risk for mental health problems in this assessment.

Table 3

FIGURE E.H.
PERCENT IN LOW EMOTIONAL HEALTH CATEGORY
STATEWIDE AND AT-RISK GROUPS



D. Problem Identification in Emotional Health and At-Risk Samples

Table 4 again shows the single parents as the most at-risk group in mental health.

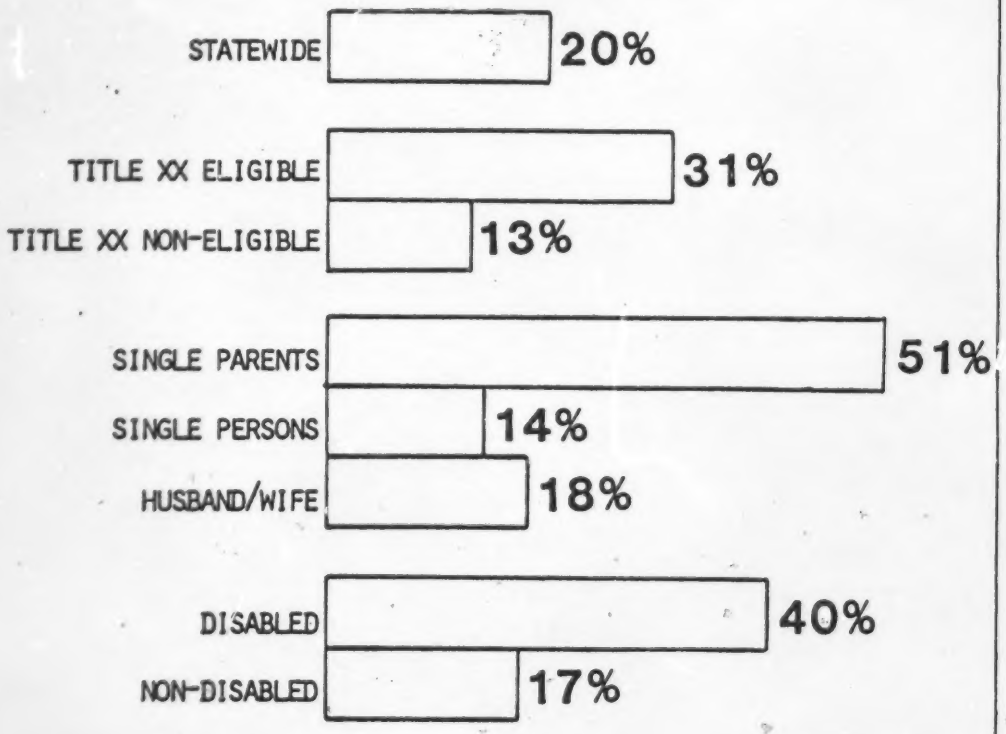
Fifty one per cent of the single parents said their emotional health was "fair" or "poor".

The physically disabled also were high on this measure, compared to the statewide sample.

Table 4

FIGURE E.H.
PERCEPTION OF OWN EMOTIONAL HEALTH
STATEWIDE AND AT-RISK GROUPS

QUESTION 95: *"Compared with other people of about the same age, would you say your overall emotional health is. . ."*



E. Two Dimensional Definition of "Current Unmet Need"

We took two of the need measures, Objective Need and Problem Identification, and combined them to gain an estimate of what we called "current unmet need."

As Table 5 indicates, "current unmet need" was defined by a cross-tab of the two measures.

For example, current unmet need included respondents who both believed they had an emotional problem and who expected they would have at least some difficulty in getting mental health services.

This measure was taken in all problem-areas. These problem-areas were then ranked according to the percentage of respondents who fell into the "current unmet need" quadrant.

For the statewide sample, the four problem-areas with the highest current unmet need were:

Employment	Financial
Social Activity	Housing

As part of SNAP, we also estimated the absolute number of Kentuckians these percentages translated to, since we had a representative sample.

For Employment, for example, 20 per cent of the respondents were in current unmet need. This would represent roughly 390,000 adult Kentuckians.

TABLE 5

TWO DIMENSIONAL DEFINITION

OF NEED

Problem Identification:		Service Difficulty: "If you needed services for emotional health problems or nerves, in general, how difficult or easy would it be for your family to get them?	
		Very Difficult (and) Somewhat Difficult	Very Easy (and) Somewhat Easy
"Compared with other people of about the same age, would you say your overall emotiona health is..."	Very Good (and) Good	Potential Need	No Need
	Fair (and) Poor	Current Need	Need Met

Need = Responsiveness of the environment by providing services to meet admitted problem.

VI. VALIDITY OF DESIGN

Now to turn from these findings, which were to give you, hopefully in this brief period, a "feel" for the data generated by SNAP.

We turn next to an analysis intended to estimate:

(1) the general validity of the design and its measures; and moreover,

(2) the validity of the design and measures in different at-risk samples.

These at-risk samples overlap in membership. They are not independent of one another. This analysis, therefore, does not compare these samples, we are not testing for differences among the sample.

A. Validity of Overall Design and Need Measures

Briefly, forward stepwise multiple regressions were performed. The quality of life score was the dependent measure - the criterion for degree of needs being met. The independent measures in this first analysis are the four need measures - standardized - and combined additively across the different topics or problem-areas in which they were asked.

Table 6 reports the beta weights for each need measure in each at-risk sample. The Multiple R for each sample was significant indicating that the sets of measures were indeed related to quality of life, and presumably to degree of needs being met.

Comparatively, the Problem Identification measure had much the strongest relationship to qualtiy of life of the four need measures.

And, this was true in each of the samples.

TABLE 6

Relative Contribution (Beta Weights) of General Need Measures to Quality of Life for the Statewide and At-Risk Samples

Need Measure	Statewide	Low Income	Non Urban	Older Person
Problem Identification	.481***	.419***	.432***	.363***
Objective Need	.070***	.085	.060	.074
Services Difficulty	.022	.067	.100**	.211***
Community Programs	.070***	.059	.052	.043
df	4,926	4,412	4,555	4,259
Multiple R	.56***	.54***	.56***	.55***

* $p < .01$
** $p < .005$
*** $p < .001$

B. Comparison of Problem-Areas

The next analysis was directed at the question "which problem-areas are most important to quality of life?"

Here, the four need measures were combined additively within each problem-area to yield an index of degree of need, from multiplely defined but equally weighted need measures, in that problem-area.

The results are shown in Table 7. Again the Multiple R was significant for each sample, suggesting that this degree of comprehensiveness was significantly related to quality of life.

You will note that, comparatively, emotional health is among the strongest problem-area across samples. This is especially interesting in that it was competing here with such "basic" areas as employment, money, and physical health.

TABLE 7

Relative Contributions (Beta Weights) of General Need Measures to Quality of Life for the Statewide and At-Risk Samples

Problem Areas	Statewide	Low Income	Non Urban	Older Persons
Mental Health	.203***	.180***	.181***	.186***
Financial	.189***	.189***	.177***	.145***
Social	.152***	.180***	.200***	.185***
Employment	.118***	.101***	.127***	.179***
Health	.061**	.015	.093***	.115
Transportation	.014	.028	.045	.097
Nutrition	.009	.018	.039	.037
Environment	.007	.088***	.041	ne
df	8,922	8,408	8,551	7,256
Multiple R	.53***	.53***	.55***	.54***

* $p < .01$
** $p < .005$
*** $p < .001$

VII. IMPLICATIONS FOR PROGRAM DECISIONS FROM A DIFFERENTIATED NEED ASSESSMENT DESIGN

The analysis we have just examined suggest at least modest validity for this comprehensive and differentiated design. Now to turn to a brief look at implications for the usage of need assessment data.

Using different types of measures of need can help define the relationship of a population need to a feasible service.

Using different types of measures of need can help in better deciding priorities for service programs in different areas.

And, the differentiated design can suggest different relative "payoffs" for services in different problem-areas.

As an example let us compare the two need measures Problem Identification - a subjective, self-referenced, evaluation - and Services Difficulty - and expectation regarding service availability.

Let us compare these two measures in two different problem-areas; Mental Health and Social Activity.

Table 8 shows this comparison for the at-risk groups. The pattern for mental health is different from that for social activity.

Availability of mental health services has little relationship to quality of life; availability of social activity services has a comparatively stronger relationship to quality of life.

Both mental health and social activity are clearly important needs: both problem-areas are strongly related to quality of life; the problem-oriented measure in each is strongly related to quality of life. But the relevance of services for the need is different.

In terms of resource allocation, increasing mental health services might have no effect on the quality of life of these at-risk groups. A response to this need, other than services, would be called for.

In terms of service programs, then, these results would suggest that money go to social activity services rather than mental health services.

Table 8

Beta Weights of Problem Identification versus Services Difficulty for Quality of Life in Mental Health and Social for At-Risk Groups

At-Risk Sample	Mental Health		Social Activity	
	Problem Identification	Services Difficulty	Problem Identification	Services Difficulty
Low Income	.162***	.069*	.117***	.207***
Rural	.152***	.037	.159***	.201***
Older Persons	.109***	.006	.119***	.18***

* $p < .01$
*** $p < .001$

VIII. CONCLUSION

We conclude that this is a successful design for need assessment. Because of its comprehensiveness it may be best suited to statewide or regional planning and resource allocation decisions. This set of need measures, however, would appear to be valid for all levels of need assessments.

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Abstract

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A measurement model was developed and refined in two successive need assessment surveys of samples representative of statewide populations. The first was the Kentucky Elderly Need Assessment (KENA) which was administered to 570 persons age 60 and older across Kentucky. The second was the Kentucky Social Services Need Assessment Project (SNAP), which was administered to over 1800 Kentucky adults. Both surveys were administered face-to-face in the respondent's home.

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